Federal Operating Permit
Article 3

This permit is based upon Federal Clean Air Act acid rain permitting requirements of Title IV, federal operating permit requirements of Title V; and Chapter 80, Article 3 and Chapter 140 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13,: 10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, 9 VAC 5-80-360 through 9 VAC 5-80-700 and 9 VAC 5-140-10 through 9 VAC 5-140-900 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Doswell Limited Partnership
Facility Name:	Doswell Generating Station
Facility Location:	10098 Old Ridge Road Ashland VA 23005
Registration Number:	51018

This permit includes the following enforcement programs:
Federally Enforceable Requirements Clean Air Act (Sections I through VIII)
Title IV Acid Rain (Section IX)
Federally Enforceable Requirements NOx Budget Trading Requirements (Section X)
State Only Enforceable Requirements (Section XI)

The Phase II Acid Rain Permit (Effective Date January 1, 2001), which applies to the simple cycle turbine, has been attached to this document (which consists of 3 pages).

January 7, 2004
Effective Date

January 7, 2009
Expiration Date

Robert G. Burnley
Director, Department of Environmental Quality

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I. Facility Information

Permittee Information
Doswell Limited Partnership
Doswell Energy Center
10098 Old Ridge Road
Ashland VA 23005

Responsible Official
Mr. Thomas R. Grieser
Assistant Secretary

Acid Rain Designated Representative & NO_x Budget Trading Authorized Account Representative
Mr. Manuel Sanchez
General Manager
Authorized Account Representative (AAR) ID No. 2058
USEPA ID number – 052019

Facility
Doswell Energy Center
10098 Old Ridge Road
Ashland VA 23005

Facility Contact Person
Ms. Anita Seigworth
Senior Plant Leader
(804) 227-2077

AIRS Identification Number: 51-085-0061

ORIS Code ID : 52019

NATS Facility Identification Number: 052019

Facility Description: SIC Code Number – 4911 and NAICS ID Code 221112.

The facility is an independent power production facility. Natural gas is received via gas pipelines and backup No. 2 Fuel Oil is available to fire up to four Kraftwerk Union V84.2 (120 MW) – combined cycle combustion turbines and associated John Zinc duct burners and one GE 7FA simple cycle combustion turbine (190MW at an ambient temperature of approximately 20^{o} F). Other auxiliary equipment includes a natural gas-fired (No. 2 Fuel Oil backup) Zurn boiler rated at 40.0 mmBTU/hr, one Cummins-West emergency generator fueled by No. 2 Fuel Oil, one Caterpillar 3208DITA Fire Pump fueled by No. 2 Fuel Oil and two (2) 7.6 million gallon fuel oil storage tanks. Fugitive VOC emissions due to fuel storage and handling are estimated to be less than 0.5 tons/year.

The Kraftwerk Union turbines were originally installed in June 1991 and the GE turbine was added in January 2001. All five turbines are subject to the requirements of 40 CFR 60, Subpart GG. The duct burners are subject to 40 CFR 60 Subpart Da, the auxiliary boiler is subject to 40 CFR 60, Subpart Dc. The facility is a Title V Acid Rain major source of PM10, SO2, NOx, CO and VOC pollutants. This source is located in an attainment area for all pollutants, and is a PSD major source. The combined cycle facility was previously permitted under a PSD Permit issued on May 4, 1990, and last amended on October 30, 2003. A permit for the addition of the GE turbine was issued April 7, 2000 and amended on October 27, 2003. The simple cycle turbine is subject to the Acid Rain Program. This Title V Acid Rain Operating Permit incorporates the permit conditions for both the combined cycle facility and the new turbine, which will be operated in simple cycle mode.

II. Emission Units:

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Equipment							
11	1	Combined Cycle Combustion Turbine 501 – Kraftwerk Union Model V84.2 (Constructed: 5-1995) Firing no. 2 fuel oil – standby	1237 mmBTU/hr. – input 122 MW – output	SCR, steam injection and burner design Kraftwerk Union (steam injection and burner design), Mitsubishi (SCR) 64%	CE1	NOx	10/30/03
12		Firing natural gas – primary	1261 mmBTU/hr. - input 122 MW – output	SCR, steam injection or burner design Kraftwerk Union (steam injection and burner design), Mitsubishi (SCR) 54%			
13	1	501 Heat Recovery Steam Generator (HRSG) with duct burner John Zinc (Constructed: 6-1990) Firing no. 2 fuel oil standby	266 mmBTU/hr. - input $500x10^3$ Lb/hr. steam output	Note: the duct burners are before the SCR. The SCR controls NOx for both the CT and DB.	-	-	10/30/03

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Equipment							
14		Firing natural gas	241 mmBTU/hr. - input $455x10^3$ Lb/hr. steam output				
21	2	Combined Cycle Combustion Turbine - 502 Kraftwerk Union Model V84.2 (Constructed: 6-1990) Firing no. 2 fuel oil – standby	1237 mmBTU/hr. – input 122 MW – output	SCR, steam injection and burner design Kraftwerk Union (steam injection and burner design), Mitsubishi (SCR) 64%	CE2	NOx	10/30/03
22		Firing natural gas – primary	1261 mmBTU/hr. – input 122 MW – output	SCR, steam injection or burner design Kraftwerk Union (steam injection and burner design), Mitsubishi (SCR) 54%			
23	2	Heat Recovery Steam Generator (HRSG) with duct burner 502 John Zinc (Constructed: 6-1990) Firing no. 2 fuel oil – standby	266 mmBTU/hr - input $500x10^3$ Lb/hr. steam output	-	-	-	10/30/03

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Equipment							
24		Firing natural gas – primary	241 mmBTU/hr - input 455x10^3 Lb/hr. steam				
31	3	Combined Cycle Combustion Turbine - 601 Kraftwerk Union Model V84.2 (Constructed: 6-1990) Firing no. 2 fuel oil – standby	1237 mmBTU/hr. – input 122 MW – output	SCR, steam injection and burner design Kraftwerk Union (steam injection and burner design) Mitsubishi (SCR) 64%	CE3	NOx	10/30/03
32		Firing natural gas – primary	1261 mmBTU/hr. – input 122 MW – output	SCR, steam injection or burner design Kraftwerk Union (steam injection and burner design) Mitsubishi (SCR) 54%			
33	3	Heat Recovery Steam Generator (HRSG) with duct burner 601 John Zinc (Constructed: 6-1990) Firing no. 2 fuel oil	266 mmBTU/hr - input 500x10^3 Lb/hr. steam output	-	-	-	10/30/03
34		Firing natural gas – primary	241 mmBTU/hr – input 455x10^3 Lb/hr. steam output				

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Equipment							
41	4	Combined Cycle Combustion Turbine - 602 Kraftwerk Union Model V84.2 (Constructed: 6-1990) Firing no. 2 fuel oil – standby	1237 mmBTU/hr – input 122 MW – output	SCR, steam injection and burner design Kraftwerk Union (steam injection and burner design) Mitsubishi (SCR) 64%	CE4	NOx	10/30/03
42		Firing natural gas – primary	1261 mmBTU/hr. – input 122 MW – output	SCR, steam injection or burner design Kraftwerk Union (steam injection and burner design) Mitsibishi (SCR) 54%			
43	4	Heat Recovery Steam Generator (HRSG) with duct burner 602 John Zinc (Constructed: 6-1990) Firing no. 2 fuel oil – standby	266 mmBTU/hr. – input 500x10^3 Lb/hr. steam output	-	-	-	10/30/03
44		Firing natural gas – primary	241 mmBTU/hr.- input 455x10^3 Lb/hr. steam output				
51	5	Auxiliary boiler Zurn (Constructed: 6-1990) Firing no. 2 fuel oil – standby	40 mmBTU/hr. - input 34,000 Lb./hr. steam output	-	-	-	10/30/03

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Equipment							
52		Firing natural gas – primary	40 mmBTU/hr. - input 31,000 Lb/hr. steam output				
61	6	Fire Pump Caterpillar 3208DITA (Constructed: 6-1990) Firing no. 2 fuel oil	1.4 mmBTU/hr. - input 145 BHP – output	-	-	-	10/30/03
71	7	Emergency Generator Cummins-West KTTA19-02 (Constructed: 6-1990) Firing no. 2 fuel oil	4mmBTU/hr. - input 45 Kw – output	-	-	-	10/30/03
81	8	Simple Cycle Combustion Turbine CT1- GE7FA (Constructed: 2-2001) Firing No. 2 distillate oil – standby	1932.4 mmBTU/hr – input 190.5 MW – output	Burner design and water injection GE 61%	CE5	NOx	10/27/03
82		Firing natural gas – primary	1752.2 mmBTU/hr – input 185 MW – output	Burner design GE 92%			
111	NA	Fuel Oil Storage Tank A (Constructed: 6-90)	Fixed roof storage tank 7.6 million gallons	-	-	-	10/30/03
112	NA	Fuel Oil Storage Tank B (Contructed: 6-90)	Fixed roof storage tank 7.6 million gallons	-	-	-	10/30/03

III. Combined Cycle Facility and Auxiliary Equipment Requirements - (Emission Unit Identification Numbers – 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 61, 71, 111, and 112):

A. Limitations:

1. Nitrogen oxide emissions from each combined cycle combustion turbine/Heat Recovery Steam Generator (HRSG) duct burner (emission unit ID #s: 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, and 43/44) shall be controlled by either combustor design or steam injection followed by a selective catalytic reduction system when burning natural gas and by steam injection followed by selective catalytic reduction when burning distillate oil.
(9 VAC 5-80-490 B and C and Specific Condition no. 3 of 10/30/03 Permit)

2. Sulfur dioxide emissions from each combined cycle combustion turbine/HRSG duct burner (emission unit ID #s: 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, and 43/44) and auxiliary boiler (emission unit ID #: 51/52) shall be controlled by using low sulfur fuels.
(9 VAC 5-80-490 B and C and Specific Condition no. 4 of 10/30/03 Permit)

3. Volatile organic compound emissions from the No. 2 fuel oil storage tanks (emission unit ID #s: 111 and 112) shall be controlled by a fixed roof design with a pressure vacuum valve.
(9 VAC 5-80-490 B and C and Specific Condition no. 5 of 10/30/03 Permit)

4. Each combined cycle combustion turbine (emission unit ID #s: 11/12, 21/22, 31/32, and 41/42) shall consume no more than 11.9×10^9 cubic feet of natural gas or 20.6×10^6 gallons of No. 2 fuel oil per year, calculated monthly as the sum of each consecutive 12 month period. No. 2 fuel oil usage shall be limited to 2,160 hours per year, calculated monthly as the sum of each consecutive 12 month period and shall only be used when natural gas is not available, supply is interrupted, or reliability testing is being conducted on the equipment.
(9 VAC 5-80-490 B and C and Specific Condition no. 6 of 10/30/03 Permit)

5. Each duct burner (emission unit ID #s: 13/14, 23/24, 33/34, and 43/44) shall consume no more than 1.6×10^9 cubic feet per year of natural gas or 4.43×10^6 gallons per year, calculated monthly as the sum of each consecutive 12 month period of No. 2 fuel oil, based on the lower heating value of the fuels. Number 2 fuel oil usage shall be limited to 2,160 hours per year, calculated monthly as the sum of each consecutive 12 month period and shall only be used when natural gas is not available, supply is interrupted or reliability testing is being conducted on the equipment.
(9 VAC 5-80-490 B and C and Specific Condition no. 7 of 10/30/03 Permit)

6. The auxiliary boiler (emission unit ID #: 51/52) shall consume no more than 3.50×10^8 cubic feet of natural gas or 6.27×10^5 gallons of No. 2 oil a year, calculated monthly as the sum of each consecutive 12 month period. Number 2 fuel oil shall only be used when natural gas is not available, supply is interrupted, or reliability testing is being conducted on the equipment.
(9 VAC 5-80-490 B and C and Specific Condition no. 8 of 10/30/03 Permit)

7. The emergency generator (emission unit ID #: 71) shall consume no more than 29,010 gallons of No. 2 fuel oil per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-490 B and C and Specific Condition no. 9 of 10/30/03 Permit)

8. The emergency generator (emission unit ID #: 71) shall operate no more than two (2) hours in any given twenty four hour period concurrently with the operation of the combined cycle combustion turbines (emission unit ID #s: 11/12, 21/22, 31/32, and 41/42) and auxiliary boiler (emission unit ID #:51/52) on distillate oil, except during an emergency.
(9 VAC 5-80-490 B and C and Specific Condition no. 10 of 10/30/03 Permit)

9. The emergency fire water diesel pump (emission unit ID #: 61) shall consume no more than 10,400 gallons of No. 2 fuel oil per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-490 B and C and Specific Condition no. 11 of 10/30/03 Permit)

10. No combined cycle combustion turbine (emission unit ID #: 11/12, 21/22, 31/32 and 41/42) shall operate at less than conditions corresponding to 65 percent of maximum load, except during start-up, shutdown, malfunction and emergency situations. Please note that maximum load of the combustion turbine is corrected to ambient conditions.
(9 VAC 5-80-490 B & C and Specific Condition no. 12 of 10/30/03 Permit)

11. If unable to dispose of old fuel stock or prevent sedimentation and/or degradation during gas supply interruption, Doswell Limited Partnership shall be allowed to burn No. 2 fuel oil in its equipment (emission unit ID #s: 11/13, 21/23, 31/32, 41/43, 51, 61, and 71). Oil burning for this purpose will not be allowed in the months of June, July and August except for the purpose of equipment reliability and/or emission testing.
(9 VAC 5-80-490 B and C and Specific Condition no. 13 of 10/30/03 Permit)

12. Criteria pollutant emissions from the operation of each of the combined cycle combustion turbines (emission unit ID #s: 11/12, 21/22, 31/32, and 41/42) shall not exceed the limitations specified below:

Combined Cycle Combustion Turbine Operating on Natural Gas

PM10	2.6×10^{-2} lbs/10^6 BTU	33.0 lbs/hr/turbine
SO2	2.9×10^{-3} lbs/10^6 BTU	3.7 lbs/hr/turbine
CO		25.0 lbs/hr/turbine
VOC		4.4 lbs/hr/turbine

NOx emission limits shall be calculated as stated in condition III.A.14 of this permit.

Combined Cycle Combustion Turbine Operating on No. 2 Oil

PM10	2.0×10^{-2} lbs/10^6 BTU	24.7 lbs/hr/turbine
SO2	7.1×10^{-2} lbs/10^6 BTU	88.9 lbs/hr/turbine

CO	29.0 lbs/hr/turbine
VOC	7.8 lbs/hr/turbine
Pb	1.7 X 10^{-2} lbs/hr/turbine

NOx emission limits shall be calculated as stated in condition III A.14 of this permit. When oil and natural gas are fired simultaneously, total emissions limits for the combination of a combined cycle combustion turbine and duct burner shall not exceed the sum of applicable fuel specific emission limits specified in conditions III A.12 and 13. (9 VAC 5-80-490 B and C and Specific Condition no. 14 of 10/30/03 Permit)

13. Criteria pollutant emissions from each duct burner (emission unit ID #s: 13/14, 23/24, 33/34, and 43/44) shall not exceed the limitations specified below:

Natural Gas

PM10	1.92 X 10^{-2} lbs/10^{6} BTU	4.6 lbs/hr/duct burner
SO2	3.1 X 10^{-3} lbs/10^{6} BTU	0.8 lbs/hr/duct burner
CO		19.7 lbs/hr/duct burner
VOCs		2.4 lbs/hr/duct burner

No. 2 Fuel Oil

PM10	3.0 X 10^{-2} lbs/10^{6} BTU	8.0 lbs/hr/duct burner
SO2	6.5 X 10^{-2} lbs/10^{6} BTU	17.3 lbs/hr/duct burner
CO		27.0 lbs/hr/duct burner
VOCs		24.0 lbs/hr/duct burner
Pb		0.005 lbs/hr/duct burner

When oil and natural gas are fired simultaneously (note: duct burners do not have the capability to burn natural gas and oil simultaneously), total emission limits for the combination of a combined cycle combustion turbine and duct burner shall not exceed the sum of applicable fuel specific emission limits specified in conditions III A.12 and 13. (9 VAC 5-80-490 B and C and Specific Condition no. 15 of 10/30/03 Permit)

14. The combined cycle combustion turbine (emission unit ID #s: 11/12, 21/22, 31/32, and 41/42), duct burner combination (emission unit ID #s: 13/14, 23/24, 33/34, and 43/44) Nitrogen Oxide (NOx) emissions shall not exceed the emission limit resulting from the calculation of the following from the equation in ppmvd corrected to 15% O_2:

$$E_s = \frac{[(H_{db\text{-}gas} * 0.10) + (H_{db\text{-}oil} * 0.12)+(H_{ct\text{-}gas} * 0.0332) + (H_{ct\text{-}oil} * 0.1166)] * 5.9}{(1.194 * 10^{-7}) * [8710 * (H_{db\text{-}gas} + H_{ct\text{-}gas}) + 9190 * (H_{db\text{-}oil} + H_{ct\text{-}oil})] * 20.9}$$

E_s is the allowable emissions in ppm @ 15% O_2

$H_{db\text{-}gas}$ is the heat input to the duct burner from natural gas (mmBTU/hr),
$H_{db\text{-}oil}$ is the heat input to the duct burner from oil (mmBTU/hr),
$H_{ct\text{-}gas}$ is the heat input to the combined cycle combustion turbine from natural gas (mmBTU/hr)
$H_{ct\text{-}oil}$ is the heat input to the combined cycle combustion turbine from oil (mmBTU/hr)

The NOx emissions shall be less than or equal to the calculated allowable limit 95% of the time (excluding periods of start-up shutdown and malfunction).
(9 VAC 5-80-490 B and C, NSPS subpart Da, the alternative monitoring compliance plan and Specific Condition no. 16 of 10/30/03 Permit)

15. Emissions from the operation of the auxiliary boiler (emission unit ID #: 51/52) shall not exceed the limitations below:

Natural Gas

	LBS/10^6 BTU	LBS/HR
PM10	0.02	0.9
SO2	0.003	0.1
NOx	0.12	4.9
CO		11.0
VOC		5.1

No. 2 Oil

	LBS/10^6 BTU	LBS/HR
PM10	0.05	2.0
SO2	0.07	2.9
NOx	0.18	7.2
CO		10.6
VOC		6.8
Lead		2.0×10^{-3}

(9 VAC 5-80-490 B and C and Specific Condition no. 17 of 10/30/03 Permit)

16. Emissions from the operation of the emergency generator (emission unit ID #: 71) shall not exceed the limitations below:

	LBS/10^6 BTU	LBS/HR
SO2		0.3
NOx	2.5	18.0

CO	2.0
VOC	0.6

(9 VAC 5-80-490 B and C and Specific Condition no. 18 of 10/30/03 Permit)

17. Emissions from the operation of the emergency diesel pump (emission unit ID #: 61) shall not exceed the limitations below:

	LBS/10^6 BTU	LBS/HR
NOx	4.5	3.5
CO		0.5

(9 VAC 5-80-490 B and C and Specific Condition no. 19 of 10/30/03 Permit)

18. Not withstanding conditions III. A. 12, 13, 15 and 16 of this permit, at no time shall total Volatile Organic Compound (VOC) emissions for the entire combined cycle (emission unit ID #s: 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 71, 111 and 112) facility exceed 213 tons per year. The Volatile Organic Compound emissions shall be calculated as follows:

$$VOC = (NG_{(ct)})(0.003 \text{ lbs}/10^3 \text{ ft}^3) + (NG_{(db)})(0.009 \text{ lbs}/10^3 \text{ ft}^3)$$
$$+ (NG_{(ab)})(0.12 \text{ lbs}/10^3 \text{ ft}^3) + (FO_{(ct)})(0.82 \text{ lbs}/10^3 \text{ gal})$$
$$+ (FO_{(db)})(11.82 \text{ lbs}/10^3 \text{ gal}) + (FO_{(ab)})(21.94 \text{ lbs}/10^3 \text{ gal})$$
$$+ (FO_{(dg)})(19.60 \text{ lbs}/10^3 \text{ gal}) + (FO_{(st)})$$

Where:
$NG_{(ct)}$ is the amount of natural gas fired in the combined cycle combustion turbine (10^3 scf),
$NG_{(db)}$ is the amount of natural gas fired in the duct burner (10^3 scf),
$NG_{(ab)}$ is the amount of natural gas fired in the auxiliary boiler (10^3 scf),
$FO_{(ct)}$ is the amount of fuel oil fired in the combined cycle combustion turbines (10^3 gallons),
$FO_{(db)}$ is the amount of fuel oil fired in the duct burner (10^3 gallons),
$FO_{(ab)}$ is the amount of fuel oil fired in the auxiliary boiler (10^3 gallons),
$FO_{(dg)}$ is the amount of fuel oil fired in the diesel generator (10^3 gallons), and
$FO_{(st)}$ is the amount of VOCs emitted during storage and handling of fuel oil (lbs.)

(9 VAC 5-80-490 B, C and E and Specific Condition no. 20 of 10/30/03 Permit)

19. Not withstanding conditions III.A. 14, 15, 16, and 17 of this permit at no time shall total nitrogen dioxide emissions for the entire combined cycle facility (emission unit ID #s: 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 61 and 71) exceed 2,376 tons per year. The nitrogen dioxide emissions shall be calculated as follows:

$$NOx = (NG_{(ct)})(0.0332 \text{ lbs}/10^6 \text{ BTU})^{(1)}$$
$$+ (NG_{(db)})(0.10 \text{ lbs}/10^6 \text{ BTU})^{(1)}$$
$$+ (NG_{(ab)})(0.12 \text{ lbs}/10^6 \text{ BTU})$$
$$+ (FO_{(ct)})(0.1166 \text{ lbs}/10^6 \text{ BTU})^{(1)}$$

+ $(FO_{(db)})(0.12\ lbs/10^6\ BTU)^{(1)}$
+ $(FO_{(ab)})(0.18\ lbs/10^6\ BTU)$
+ $(FO_{(dg)})(4.5\ lbs/10^6\ BTU)$
+ $(FO_{(dp)})(2.5\ lbs/10^6\ BTU)$

Where:

$NG_{(ct)}$ is the heat input to the combined cycle combustion turbine from natural gas (10^6 BTUs),
$NG_{(db)}$ is the heat input to the duct burner from natural gas (10^6 BTU),
$NG_{(ab)}$ is the heat input to the auxiliary boiler from natural gas (10^6 BTU),
$FO_{(ct)}$ is the heat input to the combined cycle combustion turbine from fuel oil (10^6 BTU),
$FO_{(db)}$ is the heat input to the duct burner from fuel oil (10^6 BTU),
$FO_{(ab)}$ is the heat input to the auxiliary boiler from fuel oil (10^6 BTU),
$FO_{(dg)}$ is the heat input to the diesel generator from fuel oil (10^6 BTU), and
$FO_{(dp)}$ is the heat input to the diesel pump from fuel oil (10^6 BTU).

(1) Emissions calculated from continuous emission monitors which meet the requirements of 40 CFR Part 75, Appendix A in lieu of 40 CFR Part 60, Appendix B, Performance Specification 2 may be substituted in the above equation for the combined duct burner and combustion turbine emissions.

(9 VAC 5-80-490 E and Specific Condition no. 21 of 10/30/03 Permit)

20. The entire combined cycle facility's (emission unit ID #s: 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 61, 71, 111 and 112) emissions shall not exceed the following calculated as the sum of each consecutive 12 month period.

	TONS/YR
PM10	623.0
SO2	2562.0**
NOx	2376.0
CO	706.0
VOC	213.0
Pb	0.40

** This is the maximum SO2 emission limit unless the summation of the calendar year amount calculated from the formula in Condition III.A.24 of this permit is lower.

(9 VAC 5-80-490 B and C and Specific Condition no. 22 of 10/30/03 Permit)

21. Visible emissions from each exhaust point at the combined cycle facility (emission unit ID #s: 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 61, 71, 111 and 112) shall not exceed ten (10) percent opacity except during periods of start-up, shutdown and malfunction.
(9 VAC 5-50-80, 9 VAC 5-80-490 B and C and Specific Condition no. 24 of 10/30/03 Permit)

22. The approved fuels for the facility (emission unit ID #s: 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 61, 71, 111 and 112) are pipeline quality natural gas (natural gas that is provided by a supplier through a pipeline) and No. 2 fuel oil. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-490 B and C and Specific Condition no. 25 of 10/30/03 Permit)

23. After September 30, 1993 the maximum allowable sulfur content of the No. 2 fuel oil purchased shall not exceed 0.05% by weight. Doswell Limited Partnership shall maintain records of all oil shipments purchased, indicating sulfur content per shipment. These records shall be available on site for inspection by department personnel. They shall be kept on file for the most current five (5) year period.

    For the auxiliary boiler, the records shall also include the name of the oil supplier; and a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. Along with these records, a certified statement signed by the owner or operator of the affected facility shall be reported each six-month period indicating that the records of fuel supplier certifications, submitted represent all of the fuel combusted during the reporting period. All reports shall be submitted to the Piedmont Region and Chief, Air Enforcement Branch (3AP13), U.S. EPA, Region III and all records shall be available on site for inspection by department personnel. They shall be kept on file for the most current five (5) year period.
(9 VAC 5-80-490 B, C and F and Specific Condition no. 26 of 10/30/03 Permit)

24. Based on the gas analysis for sulfur content, annual allowable sulfur dioxide emissions shall be calculated as follows:

Combined Cycle Combustion Turbine (Emission Unit ID #s: 12, 22, 32 and 42): (Per Unit)

$$SO2 = S \frac{SCFNG_{Dec.} - SCFNG_{Jan.}}{Month} \times \frac{\text{Grains Total Sulfur}}{SCF} \times \frac{1 \text{ Pound}}{7000 \text{ Grains}} \times \frac{1 \text{ Ton}}{2000 \text{ Pounds}} \times \frac{2 \text{ Tons } SO2}{\text{Ton S}} + 295$$

Duct Burner (Emission Unit ID #s: 14, 24, 34, and 44): (Per Unit)

$$SO2 = S \frac{SCFNG_{Dec.} - SCFNG_{Jan.}}{Month} \times \frac{\text{Grains Total Sulfur}}{SCF} \times \frac{1 \text{ Pound}}{7000 \text{ Grains}} \times \frac{1 \text{ Ton}}{2000 \text{ Pounds}} \times \frac{2 \text{ Tons } SO2}{\text{Ton S}} + 57.5$$

Auxiliary Boiler (Emission Unit ID #: 52):

$$SO2 = \sum_{Jan.}^{Dec.} \frac{SCFNG}{Month} \times \frac{Grains\ Total\ Sulfur}{SCF} \times \frac{1\ Pound}{7000\ Grains} \times \frac{1\ Ton}{2000\ Pounds} \times \frac{2\ Tons\ SO2}{Ton\ S} + 9.6$$

Doswell Limited Partnership shall keep monthly records of natural gas consumption for each of the above units and total sulfur analysis for the purpose of computing the allowable emission rates. The sulfur analysis shall be performed in accordance with the alternative sampling schedule that has been approved by the Environmental Protection Agency.
(9 VAC 5-80-490 B, C and F and Specific Condition no. 27 of 10/30/03 Permit)

25. Thirty days after the end of each calendar quarter in which there are opacity excess emissions during oil combustion, Doswell will submit an excess emission report (EER) to the Department (Director, Piedmont Regional Office) and the US EPA-Region III. If there are no opacity excess emissions during a calendar quarter, EERs will be submitted on a semiannual basis. For reporting purposes, excess emissions are defined as any six minute period during which the average opacity exceeds 10 percent, except during startup, shutdown or malfunction, and EERs will indicate the total time of the visible emission observations during a calendar quarter and identify the duration of any excess emissions.
(9 VAC 5-80-490 F and Specific Condition no. 32 of 10/30/03 Permit)

B. Monitoring and Recordkeeping

1. Continuous emission monitoring systems (CEMS) shall be installed on each HRSG (emission unit ID #s: 13/14, 23/24, 33/34, and 43/44) exhaust stack to measure and record, the concentration of nitrogen oxides, and oxygen emitted from the combined combustion turbine (emission unit ID #s: 11/12, 21/22, 31/32, and 41/42) and duct burner exhaust (emission unit ID #s: 13/14, 23/24, 33/34, and 43/44). They shall be maintained and calibrated in accordance with 40 CFR Part 75, Appendix B in lieu of 40 CFR Part 60, Appendix B and Appendix F. A 30 day notification prior to the demonstration of continuous monitoring system performance and subsequent notification requirements, are to be submitted to the Department (Director, Piedmont Regional Office).
(9 VAC 5-80-490 E and F and Specific Condition no. 28 of 10/30/03 Permit)

2. Continuous monitoring systems shall be installed to monitor and record the fuel oil and natural gas consumption as required in the alternative monitoring plan approved by US EPA. The monitoring systems shall be in operation at all times when the combined cycle turbines or turbine/duct burner combination are in operation. They shall be maintained and calibrated in accordance with the manufacturer's specifications.
(9 VAC 5- 80-490 E and Specific Condition no. 29 of 10/30/03 Permit)

3. Doswell Limited Partnership shall monitor the sulfur content of the no. 2 fuel oil being fired in the combined cycle combustion turbines (emission unit ID #s: 11/12, 21/22, 31/32, and 41/42) in accordance with 40 CFR 60 Section 60.334(b). In accordance with the approved modified testing schedule Doswell Limited Partnership shall monitor the natural gas sulfur content twice per annum during the first and third quarter of each calendar year. If any sulfur analysis indicates noncompliance with 40 CFR 60.333 the owner or operator shall notify the US EPA Regional Office Air Division and the Piedmont Regional Office of such excess emissions and the custom fuel monitoring schedule shall be conducted weekly during the interim period when this custom schedule is being re-examined. A change in the fuel supply shall also cause a review of the custom fuel-monitoring schedule. Records associated with the custom fuel-monitoring schedule shall be retained for a period of five (5) years.
(9 VAC 5-80-490 C, E and F and Specific Condition no. 30 of 10/30/03 Permit)

4. Doswell Limited Partnership shall submit to the Department (Director, Piedmont Regional Office) reports during periods of excess emissions as required under Section 60.334(c)(2) and (3) of 40 CFR 60 Subpart GG every calendar quarter and as required in the approved alternative compliance plan. Doswell Limited Partnership shall submit and report excess NOx emissions on a quarterly basis. Excess emissions shall be calculated as expressed in condition III.A.14. In addition NOx emission monitors shall be available at least 90% of the source operating time (excluding the period of time that the quality assurance check is being conducted). The CEM availability shall be calculated as follows:

$$A^* = \frac{\sum Hc}{\sum Ho} \times 100$$

Where:
A*: is the percent of time that the CEM was available,
Hc:is the number of hours the CEM collected valid data and
Ho:is the number of hours that the combined cycle combustion turbine operated.

* The hours of valid data and the operating hours shall be summed over the most recent four quarters.

The NOx emissions shall be less than or equal to the calculated allowable limit 95% of the time (excluding periods of start-up, shut down and malfunction). The percent of the time that emissions are less than or equal to allowable limits shall be calculated as follows:

$$C^* = \left(1 - \frac{\sum He}{\sum Hv}\right) \times 100$$

Where C is the percent of time that emissions are less than or equal to allowable limits,

H_e is the number of hours that emissions are greater than allowable limits, and

H_v is the number of hours that the CEM was collecting valid data.

* The number of hours that emissions are greater than allowable limits and the hours of valid data shall be summed over the most recent four quarters.

(9 VAC 5-80-490 C, E and F and Specific Condition no. 31 of 10/30/03 Permit)

5. Doswell Limited Partnership shall meet all applicable requirements of 40 CFR Part 60 Subpart GG - Standards of Performance for Stationary Gas Turbines and 40 CFR Part 60 Subpart Da - Standards of Performance for Electric Utility Steam Generating Units, except as provided in the federally approved alternative monitoring method for opacity and NOx emissions from the combined cycle combustion turbines (emission unit ID #s; 11/12, 21/22, 31/32, and 41/42)/HRSG duct burner (emission unit ID #s: 13/14, 23/24, 33/34, and 43/44) firing; and 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.
(9 VAC 5-80-490 E and F and Specific Condition no. 33 of 10/30/03 Permit)

6. Doswell Limited Partnership shall conduct opacity observations when oil is combusted in the duct burners. The opacity observation shall be conducted as a replacement for the continuous opacity monitor required in 40 CFR 60 Subpart Da. The opacity observation shall be conducted at least once during each daylight shift that duct burners combust oil. The observer shall be certified in accordance with EPA Reference Test Method 9. The observation shall, at a minimum, consist of a six (6) minute visible emission observation recording the stack opacity readings every 15 seconds as required by Method 9 procedures. If the average opacity for a six (6) minute set of opacity readings exceeds 10%, the qualified VEE observer shall collect two additional six (6) minute sets of visible emissions readings for a total of three (3) sets.
(9 VAC 5-80-490 C, E and F and Specific Condition no. 34 of 10/30/03 Permit)

7. Doswell will record the quantity of distillate oil burned for each duct burner (emission unit ID #s: 13, 23, 33, and 43) each calendar quarter and include this information in the EERs. If, based upon this information, the distillate oil annual capacity factor ever exceeds 10 percent for any of the duct burners (emission unit ID #s: 13, 23, 33, and 43), Doswell will no longer qualify to use this opacity monitoring alternative at that duct burner (emission unit ID #: 13, 23, 33, and 43), and the company will propose a schedule for re-certifying the continuous opacity monitor for the affected duct burner (emission unit ID #s: 13, 23, 33, and 43). The alternative opacity monitoring approval is valid only during operation on distillate oil, and the alternative may not be used if any other liquid or solid fuels are burned. All records required by this alternative opacity monitoring method shall be maintained for a period of five (5) years.
(9 VAC 5-80-490 B, C and E and Specific Condition no. 35 of 10/30/03 Permit)

8. The permittee shall retain records of all emission data and operating parameters (emission unit ID #s: 11/12, 21/22, 31/32, 41/42 13/14, 23/24, 33/34, 43/44, 51/52, 71, 61, 111 and 112) required to be monitored by the terms of this permit. These records shall be maintained by the source for the most current five (5) year period.
(9 VAC 5-80-490 C and F and General Condition no. 3 of 10/30/03 Permit)

9. The emissions from exhaust stacks (except the duct burner exhaust stacks) shall be observed visually at least once each calendar month for at least a brief time period during normal operations to determine if they have above normal visible emissions (does

not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded. If an emission point is not operated during the calendar month, then no visible emission observation needs to be performed and a negative declaration shall be entered in the record stating the emission unit was not in operation. Should emission point operation be limited or intermittent, and/or adverse conditions (e.g. weather or darkness) prevail during the limited or intermittent operating period, no visible emission observation needs to be performed and a negative declaration shall be entered in the record along with the date(s) of operation, the hours of operation of the emission unit and a notation indicating inclement weather.
(9 VAC 5-80-490 B, C and E)

10. Records shall be kept demonstrating the pressure vacuum valves for fuel oil storage tanks A and B (emission units: 111 & 112) are in good operating order and the fixed roofs are in acceptable condition.
(9 VAC 5-80-490 B, C and E)

11. Daily records shall be kept of the amounts of each fuel combusted during each day in the auxiliary boiler (emission unit: 51/52).
(9 VAC 5-80-490 B, C and E and 40 CFR 60.48c(g))

12. The duct burners (emission units: 13/14, 23/24, 33/34, and 43/44) will be maintained as according to procedures and schedules recommended by the manufacturer. Records shall be kept demonstrating maintenance has been performed.
(9 VAC 5-80-490 B, C and E and Alternative Opacity Monitoring Method Under NSPS Da dated March 1998)

C. Reporting:

1. Thirty days after the end of each calendar quarter in which there are opacity excess emissions during oil combustion, Doswell will submit an excess emission report (EER) to the Department (Director, Piedmont Regional Office) and the US EPA-Region III. If there are no opacity excess emissions during a calendar quarter, EERs will be submitted on a semiannual basis. For reporting purposes, excess emissions are defined as any six minute period during which the average opacity exceeds 10 percent, except during startup, shutdown or malfunction, and EERs will indicate the total time of the visible emission observations during a calendar quarter and identify the duration of any excess emissions.
(9 VAC 5-80-490 F and Specific Condition no. 32 of 10/30/03 Permit)

2. Doswell Limited Partnership shall submit to the Department (Director, Piedmont Regional Office) reports during periods of excess emissions as required under Section 60.334(c)(2) and (3) of 40 CFR 60 Subpart GG every calendar quarter and as required in the approved alternative compliance plan. Doswell Limited Partnership shall submit and **report excess NOx emissions on a quarterly basis**. Excess emissions shall be calculated as expressed in condition III.A.14. In addition NOx emission monitors shall be

available at least 90% of the source operating time (excluding the period of time that the quality assurance check is being conducted). The CEM availability shall be calculated as follows:

$$A^* = \frac{\sum Hc}{\sum Ho} \times 100$$

Where:
A*: is the percent of time that the CEM was available,
Hc:is the number of hours the CEM collected valid data and
Ho:is the number of hours that the combined cycle combustion turbine operated.

* The hours of valid data and the operating hours shall be summed over the most recent four quarters.

The NOx emissions shall be less than or equal to the calculated allowable limit 95% of the time (excluding periods of start-up, shut down and malfunction). The percent of the time that emissions are less than or equal to allowable limits shall be calculated as follows:

$$C^* = \left(1 - \frac{\sum He}{\sum Hv}\right) \times 100$$

Where C is the percent of time that emissions are less than or equal to allowable limits,

H_e is the number of hours that emissions are greater than allowable limits, and
H_v is the number of hours that the CEM was collecting valid data.

* The number of hours that emissions are greater than allowable limits and the hours of valid data shall be summed over the most recent four quarters.

(9 VAC 5-80-490 C, E and F and Specific Condition no. 31 of 10/30/03 Permit)

IV. Simple Cycle Combustion Turbine Requirements- (Emission Unit Identification Number – 81/82):

A. Limitations:

1. Nitrogen oxide (NO_x) emissions from the simple cycle combustion turbine (CT) (emission unit ID #: 81/82) shall be controlled by the utilization of a dry low NOx combustor when firing natural gas and by water injection when firing No. 2 distillate fuel oil. The simple cycle combustion turbine (CT) (emission unit ID #: 81/82) shall be provided with adequate access for inspection.
(9 VAC 5-80-490 B & C and Condition 3 of 10/27/03 Permit)

2. Sulfur dioxide emissions from the simple cycle combustion turbine (CT) (emission unit ID #: 81/82) shall be controlled by the use of low sulfur fuels.
(9 VAC 5-80-490 B & C and Condition 4 of 10/27/03 Permit)

3. Particulate matter (PM) emissions from the simple cycle combustion turbine (CT) (emission unit ID #: 81/82) shall be controlled by the use of clean burning fuels and good combustion operating practices.
(9 VAC 5-80-490 B & C and Condition 5 of 10/27/03 Permit)

4. Volatile organic compounds and carbon monoxide emissions from the simple cycle combustion turbine (CT) (emission unit ID #: 81/82) shall be controlled by the use of good combustion operating practices.
(9 VAC 5-80-490 B & C and Condition 6 of 10/27/03 Permit)

5. Short-term emission limits from the operation of the simple cycle combustion turbine (CT) (emission unit ID #: 82) while fired on natural gas shall not exceed the limits specified below (except during start-up, shutdown and malfunction conditions):

PM10	9.0 x 10^{-3}lbs/10^{6} BTU	9.0 lbs/hr
SO2	2.8 x 10^{-3}lbs/10^{6} BTU	5.0 lbs/hr
VOC		5.0 lbs/hr
Carbon monoxide		32.0 lbs/hr
Nitrogen oxides		64.0 lbs/hr
	9 ppmd @ 15% O_2	(1-hour average)

(9 VAC 5-80-490 B & C and Condition no. 7 of 10/27/03 Permit)

6. Short-term emission limits from the operation of the simple cycle combustion turbine (CT) (emission unit ID #: 81) while fired on No. 2 distillate fuel oil shall not exceed the limits specified below (except during start-up, shutdown and malfunction conditions):

PM10	1.7 x 10^{-2}lbs/10^{6} BTU	17.0 lbs/hr
SO2	5.4 x 10^{-2} lbs/10^{6} BTU	105.0 lbs/hr
VOC		7.5 lbs/hr
Carbon monoxide		97.0 lbs/hr
Nitrogen oxides (with FBN)		505.0 lbs/hr
	*42 ppmdv @ 15% O_2	(1-hour average)

*See Condition IV.A.11 for FBN addition.

(9 VAC 5-80-490 B & C and Condition no. 8 of 10/27/03 Permit)

7. In conjunction with stack tests and based on the DEQ's Piedmont Regional Office's (PRO) approval, the permittee's definitions of start-up and shut down shall be defined as follows:

Startup is the time from "flame on" plus 1 hour rounded to the next clock hour. Shutdown is the time the "stop" command is given plus 1 hour rounded to the next clock hour.
(9 VAC 5-80-490 B & C and Condition no. 9 of 10/27/03 Permit)

8. Annual emissions from the permittee's Simple Cycle Combustion Turbine Facility (emission unit ID #: 81/82) shall not exceed the limits specified below:

PM10	11.0 tons/yr
SO2	26.6 tons/yr
VOC	4.0 tons/yr
Carbon monoxide	46.0 tons/yr
Nitrogen oxides	162.2 tons/yr

(9 VAC 5-80-490 B & C and Condition no. 10 of 10/27/03 Permit)

9. The simple cycle combustion turbine (emission unit ID #: 81/82) shall consume no more than the heat input quantity of natural gas and No. 2 distillate oil fuel annually, calculated daily as the sum of each consecutive 365 day period, as follows:

   a. Total heat input to the simple cycle combustion turbine (emission unit ID #: 81/82) shall not exceed 3,993,000 mmBTU (HHV) per year for No. 2 distillate oil and natural gas (100,000 BTU/100 scf of natural gas).

   b. Total heat input from the combustion of No. 2 distillate oil in the simple cycle combustion turbine (emission unit ID #: 81/82) shall not exceed 1,076,700 mmBTU (HHV) per year (138,000 BTU/gallon).

   (9 VAC 5-80-490 B & C and Condition no. 12 of 10/27/03 Permit)

10. The combined annual nitrogen oxides emission rate for a combination of natural gas and low sulfur fuel oil for the simple cycle combustion turbine (emission unit ID #: 81/82) shall not exceed a total of 162.2 tons per year, calculated daily as the sum of each consecutive 365 day period.
    (9 VAC 5-80-490 B & C and Condition no. 13 of 10/27/03 Permit)

11. Nitrogen oxide emissions (emission unit ID #: 81) when firing No. 2 distillate fuel oil shall not exceed 42 ppmd at 15% O_2 on a 1 - hour average basis (as measured by CEMs), when fuel bound nitrogen (FBN) values are less than or equal to 0.015 percent. For fuel bound nitrogen values up to 0.05 percent (the maximum FBN allowed), the adjusted standard shall be determined, recorded and maintained upon each new fuel delivery by the following formula:

    STD = (0.04 * N) + 0.0042 where:

    STD = allowable NO_x emissions (percent by volume at 15 percent 0_2 and on a dry basis)
    N = the nitrogen content of the fuel oil (% by weight)
    Note: 0.0042 percent = 42 ppm

    (9 VAC 5-80-490 B, C and E and Condition no. 14 of 10/27/03 Permit)

12. The simple cycle combustion turbine (emission unit ID #: 81/82) shall not operate at less than conditions corresponding to 50 percent simple cycle combustion turbine design maximum load corrected to ambient conditions, except during start-up, shut down, malfunction and emergency situations.
(9 VAC 5-80-490 B, C and E and Condition no. 15 of 10/27/03 Permit)

13. The approved fuels for the simple cycle combustion turbine (emission unit ID #: 81/82) are pipeline quality natural gas (natural gas that is provided by a supplier through a pipeline) (primary fuel) and No. 2 distillate fuel oil (back-up fuel). Distillate oil is defined as fuel oil that meets the specifications for Fuel Oil Numbers 1 or 2 under the American Society for Testing and Materials, ASTM 396-78 Standard Specification for Fuel Oils, or other approved ASTM method, incorporated in 40 CFR 60 by reference. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-490 B, C and E and Condition no. 16 of 10/27/03 Permit)

14. The maximum sulfur content of the natural gas to be burned in the simple cycle combustion turbine (CT) (emission unit ID #: 82) shall not exceed one (1) grain per 100 dry standard cubic feet.
(9 VAC 5-80-490 B, C and E and Condition no. 17 of 10/27/03 Permit)

15. The maximum sulfur content of the oil purchased to be fired in the simple cycle combustion turbine (emission unit ID #: 81) shall not exceed 0.05 weight percent per shipment.
(9 VAC 5-80-490 B, C and E and Condition no. 18 of 10/27/03 Permit)

16. Visible emissions (VE) from the simple cycle combustion turbine (CT) exhaust stack (emission unit ID #: 81/82) shall not exceed ten (10) percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed twenty (20) percent opacity as determined by the Environmental Protection Agency's (EPA) Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-80-490 B, C and E and Condition no. 19 of 10/27/03 Permit)

17. Except as specified in this permit the simple cycle combustion turbine (CT) (emission unit ID #: 81/82) is to be operated in compliance with all applicable requirements of 40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines.
(9 VAC 5-80-490 B, C and E and Condition no. 28 of 10/27/03 Permit)

B. Periodic Monitoring and Recordkeeping

1. The permittee shall monitor the sulfur content of the natural gas being fired in the simple cycle combustion turbine (CT) (emission unit ID #: 81/82), in accordance with the custom-monitoring schedule approved for the site. Specifically, sulfur content sample analysis shall be conducted twice per calendar year during the first and third quarter of each year. If any sulfur analysis indicate noncompliance with 40 CFR 60.333 the owner or operator shall notify the US EPA Regional Office Air Division of such excess

emissions and the custom fuel monitoring schedule shall be conducted weekly during the interim period when this schedule is being re-examined. A change in the fuel supply shall also cause a review of the custom fuel-monitoring schedule. Records associated with the custom fuel-monitoring schedule shall be retained for a period of five (5) years. (9 VAC 5-80-490 C, E and F and Condition no. 21 of 10/27/03 Permit)

2. The permittee shall test the No.2 distillate fuel oil for sulfur and nitrogen content on each occasion that fuel is transferred (as referenced in Appendix A of 40 CFR 60) to the storage tank (emission unit ID #: 111 and 112), from any other source. Fuel oil sulfur content shall be determined using ASTM D2880-78 or another approved ASTM method incorporated in 40 CFR 60 by reference. Fuel oil nitrogen content shall be determined by following current ASTM procedures approved by the Administrator of the US EPA. Initial test methods and changes to test methods used by the permittee to determine sulfur and nitrogen content shall be submitted to and approved by the Piedmont Regional Office (PRO) of the DEQ. Records of fuel oil sulfur and nitrogen content shall be available on site for inspection by DEQ personnel. They shall be kept on file for the most current five-year period.
(9 VAC 5-80-490 C, E and F and Condition no. 22 of 10/27/03 Permit)

3. Continuous emission monitoring (CEM) systems shall be installed on the simple cycle combustion turbine (emission unit ID #: 81/82) exhaust stack to measure and record the concentration of nitrogen oxides (measured as NO_x) emitted from the simple cycle combustion turbine (CT) (emission unit ID #: 81/82) exhaust stack. Each nitrogen oxide emissions monitor shall be co-located with an O_2 monitor.

    a. The monitors shall be located, maintained, and calibrated in accordance with performance specifications and test procedures identified in 40 CFR 75. The quality assurance of data generated by the CEMs shall be demonstrated by implementing or exceeding the minimum requirements for CEM quality assurance as defined in 40 CFR 75.

    b. The Piedmont Regional Office (PRO) of the DEQ shall be notified in writing at least thirty (30) days prior to the demonstration of the continuous monitoring system performance. Subsequent similar notification requirements are to be submitted to the Piedmont Regional Office (PRO) of the DEQ.

    (9 VAC 5-80-490 C, E and F and Condition no. 23 of 10/27/03 Permit)

4. The nitrogen oxides CEMs required by this permit shall meet a minimum data capture of 90 percent of the simple cycle combustion turbine (CT) (emission unit ID #: 81/82) facility operating hours, calculated quarterly as the sum of each consecutive four quarters. The CEM availability shall be calculated as follows:

$$A^* = \frac{\sum Hc}{\sum Ho} \times 100$$

Where:
A* :is the percent of time that the CEM was available,
Hc:is the number of hours the CEM collected valid data and
Ho:is the number of hours that the simple cycle combustion turbine operated.

* The hours of valid data and the operating hours shall be summed over the most recent four quarters.

The NOx emissions shall be less than or equal to the calculated allowable limit 95% of the time (excluding periods of start-up, shut down and malfunction). The percent of the time that emissions are less than or equal to allowable limits shall be calculated as follows:

$$C^* = \left(1 - \frac{\sum He}{\sum Hv}\right) \times 100$$

Where C is the percent of time that emissions are less than or equal to allowable limits,

H_e is the number of hours that emissions are greater than allowable limits, and
H_v is the number of hours that the CEM was collecting valid data.

* The number of hours that emissions are greater than allowable limits and the hours of valid data shall be summed over the most recent four quarters.

(9 VAC 5-80-490 C, E and F and Condition no. 24 of 10/27/03 Permit)

5. In the event of a nitrogen oxide CEM failure (emission unit ID #: 81/82), the permittee must either:

   a. Use the maximum allowable hourly NO_x emission rate (including excess fuel bound nitrogen), for each hour of operation where CEM data is not available. This data shall be included in the rolling 365 day emission summation; or

   b. Estimate emissions as stated in 40 CFR 75 subpart D.

   (9 VAC 5-80-490 C, E and F and Condition no. 25 of 10/27/03 Permit)

6. The permittee shall maintain records of all emission data, fuel throughputs and operating parameters (emission unit ID #: 81/82) required to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office (PRO) of the DEQ.
   (9 VAC 5-80-490 B, C and E and Condition no. 27 of 10/27/03 Permit)

7. The nitrogen oxide emission monitor required by this permit, the continuous monitoring data, and the quality assurance data (emission unit ID #: 81/82) shall, at the discretion of the Board, be used to determine compliance with the NO_x emission limits and/or relevant emission standards. Each monitor is subject to such data capture requirements and/or quality assurance requirements as specified in this permit and as may be deemed appropriate by the Board (40 CFR 75).
   (9 VAC 5-80-490 B, C and E and Condition no. 29 of 10/27/03 Permit)

8. In order to minimize the duration and frequency of excess emissions due to malfunctions of process equipment or air pollution control equipment, the permittee shall:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be maintained on site for a period of five (5) years and shall be made available to DEQ personnel upon request.

b. Maintain a suitable inventory of spare parts to minimize the duration of air pollution control equipment breakdown.

(9 VAC 5-80-490 B, C and E and Condition no. 32 of 10/27/03 Permit)

9. The emissions from exhaust stacks shall be observed visually at least once each calendar month for at least a brief time period during normal operations to determine if they have above normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded. If an emission point is not operated during the calendar month, then no visible emission observation needs to be performed and a negative declaration shall be entered in the record stating the emission unit was not in operation. Should emission point operation be limited or intermittent, and/or adverse conditions (e.g. weather or darkness) prevail during the limited or intermittent operating period, no visible emission observation needs to be performed and a negative declaration shall be entered in the record along with the date(s) of operation, the hours of operation of the emission unit and a notation indicating inclement weather.
(9 VAC 5-80-490 B, C and E)

C. Reporting

1. Doswell Limited Partnership shall submit quarterly excess emission reports for the simple cycle turbine (emission unit ID #: 81/82) to the Piedmont Regional Office (PRO) of the DEQ within 30 days after the end of each calendar quarter or semi-annually as needed. Details of the quarterly reports are to be arranged with the Piedmont Regional Office (PRO). Each quarterly report shall cover, at a minimum, the dates included in the calendar quarter and provide the following information for each day in the quarter, report each hour in which a nitrogen oxides permit limit is exceeded, copy of the written notification and corrective action taken. The report shall include the following for each excess emission of nitrogen oxides (NO_x): start time, duration, equipment involved, actual NO_x emissions in ppmdv @ 15% O_2, fuel type and consumption rate in BTUs, nitrogen content of fuel oil (if oil-fired) and the simple cycle combustion turbine (CT) (emission unit ID #: 81/82) load. If, during the calendar quarter, there are no times when a nitrogen oxides permit limit is exceeded, the permittee shall state in the quarterly report that no such events occurred during the affected calendar quarter.
(9 VAC 5-80-490 F and Condition no. 26 of 10/27/03 Permit)

V. FACILITY WIDE CONDITIONS

A. Testing

1. The permitted facility shall be designed and constructed so as to allow emissions testing using appropriate methods upon reasonable notice at any time.
(9 VAC 5-80-490 C and E and General Condition no. 1 for 10/30/03 permit (combined cycle facility) and condition no. 20 for 10/27/03 permit (simple cycle facility))

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

The following table is only required for those pollutants that have emission limits.

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
VOC	EPA Methods 24, 24a
NOx	EPA Method 7, 20
SO2	EPA Method 6, 20
CO	EPA Method 10
PM/PM10	EPA Methods 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-490 E and F)

VI. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
1	Ammonia Storage	5-80-720 B.	Ammonia	10,000 gal. each
2	Ammonia Storage	5-80-720 B.	Ammonia	10,000 gal. each
N/A	Water Treatment Facility	5-80-720 A. 43	N/A	N/A

Combustion air heats water in the Heat recovery steam generator (HRSG), which turns the two steam turbines. Grey and potable water from Hanover County are treated on-site for use as boiler water, water for emission control and steam for emission control. Additionally, anhydrous ammonia is stored on-site for use in the SCR unit.

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-490 C, E, and F.

VII. Permit Shield

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of applicability
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	Indirect measure of NO_X (water to fuel ratio) replaced with direct measure.
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	Exempt from testing for nitrogen content in natural gas because no allowance is provided for nitrogen in the fuel when natural gas is fired.
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	Modified schedule for sampling sulfur in natural gas.
40 CFR 72	Acid Rain Program	Combined cycle facility exempt from requirements of the acid rain program because it held a qualifying power purchase commitment prior to Nov. 15, 1990 (40 CFR 72.6(b)(6)(I) and (ii)
40 CFR 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.	40 CFR 60 Subpart Kb is not applicable as per 40 CFR 60.110b (b) to the two fuel oil storage tanks each with a capacity of 7.6 million gals and each with a maximum true vapor pressure less than 3.5 kilopascals.

Nothing in this permit shield shall alter the provisions of ' 303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to § 114 of the federal Clean Air Act, (ii) the Board pursuant to § 10.1-1314 or ' 10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to § 10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-500 C)

VIII. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-490 N)

B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the effective date. Unless a timely and complete renewal application consistent, with 9 VAC 5-80-430, has been submitted, to the Department, by the owner, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 3, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-510.

3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-430 for a renewal permit, except in compliance with a permit issued under Article 3, Part II of 9 VAC 5 Chapter 80.

4. If an applicant submits a timely and complete application under section 9 VAC 5-80-430 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-500, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-430 shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-430 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-430 B, C and F, 9 VAC 5-80-490 D and 9 VAC 5-80-530 B)

C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

a. The date, place as defined in the permit, and time of sampling or measurements.
b. The date(s) analyses were performed.
c. The company or entity that performed the analyses.
d. The analytical techniques or methods used.
e. The results of such analyses.
f. The operating conditions existing at the time of sampling or measurement.
(9 VAC 5-80-490 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-490 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-430 G, and shall include:

a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

b. All deviations from permit requirements. For purposes of this permit, a "deviation" include, but are not limited to:

1. Exceedance of emissions limitations or operational restrictions,
2. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,
3. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period".
(9 VAC 5-80-490 F)

D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to § 114(a)(3) and § 504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-430 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.

2. A description of the means for assessing or monitoring the compliance of the source with its emissions limitations, standards, and work practices.

3. The identification of each term or condition of the permit that is the basis of the certification.

4. Consistent with subsection 9 VAC 5-80-490 E, the method or methods used for determining the compliance status of the source at the time of certification and over the certification period.

5. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

6. The status of compliance with the terms and conditions of this permit for the certification period.

7. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029.

(9 VAC 5-80-490 K.5

E. Permit Deviation Reporting

The permittee shall notify the Director, PRO Region within four daytime business hours, after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition **IX.C.3**. of this permit.
(9 VAC 5-80-490 F.2)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour,

the owner shall, as soon as practicable but no later than four daytime business hours after discovery, notify the Director, Piedmont Region by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within two weeks provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, PRO Region.
(9 VAC 5-20-180 C)

1. The emission units that have continuous monitors subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not subject to the two week written notification.

2. The emission units subject to the reporting and the procedure requirements of 9 VAC 5-40-50 C and the procedures of 9 VAC 5-50-50 C are listed below:

   a. Combined Cycle Combustion Turbine 501 - Kraftwerk Union Model V84.2 (emission unit: 11/12)
   b. Heat Recovery Steam Generator (HRSG) with duct burner - John Zinc (emission unit: 13/14)
   c. Combined Cycle Combustion Turbine 502 – Kraftwerk Union Model V84.2 (emission unit: 21/22)
   d. Heat Recovery Steam Generator (HRSG) (502) with duct burner - John Zinc (emission unit: 23/24)
   e. Combined Cycle Combustion Turbine 601 – Kraftwerk Union Model V84.2 (emission unit: 31/32)
   f. Heat Recovery Steam Generator (HRSG) (601) with duct burner - John Zinc (emission unit: 33/34)
   g. Combined Cycle Combustion Turbine (602) - Kraftwerk Union Model V84.2 (emission unit: 41/42)
   h. Heat Recovery Steam Generator (HRSG) with duct burner (602) - John Zinc (emission unit: 43/44)
   i. Simple Cycle Combustion Turbine CT1- GE7FA (emission unit: 81/82)

3. Each owner required to install a continuous monitoring system subject to 9 VAC 5-40-41 or 9 VAC 5-50-410 shall submit a written report of excess emissions (as defined in the applicable emission standard) to the board for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information:

   a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9 VAC 5-40-41 B 6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

   b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

4. All emission units not subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C must make written reports within two weeks of the malfunction occurrence.
(9 VAC 5-20-180 C, 9 VAC 5-40-50, and 9 VAC 5-50-50)

G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-490 G.1)

H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
(9 VAC 5-80-490 G.2)

I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-490 G.3)

J. Permit Modification

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-490 G and L)(9 VAC 5-80-550 and 9 VAC 5-80-660)

K. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-490 G.5)

L. Duty to Submit Information

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-490 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-430 G and 9 VAC 5-80-490 K.1.
(9 VAC 5-80-430 G and 9 VAC 5-80-490 K.1)

M. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-360 through 9 VAC 5-80-705 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-355.
(9 VAC 5-80-490 H)

N. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited, to the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;

4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and

5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-20 E, 9 VAC 5-50-90, and 9 VAC 5-50-50)

O. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-40-20 E and 9 VAC 5-50-20 E)

P. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-500 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80 Article 3.
(9 VAC 5-80-490 J)

Q. Inspection and Entry Requirements

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-490 K.2)

R. Reopening For Cause

The permit shall be reopened by the board if additional federal requirements become applicable to a major source with a remaining permit term of three or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-430 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-490 D.

(9 VAC 5-80-490 L)

S. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-510 E)

T. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-520)

2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-560.
(9 VAC 5-80-520)

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-560.
(9 VAC 5-80-520)

U. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the conditions of paragraph 2 are met.

2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

b. The permitted facility was at the time being properly operated.

c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-490 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any requirement applicable to the source.

4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-650)

V. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 3. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-490 G & L, 9 VAC 5-80-640, and 9 VAC 5-80-660)

W. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-430 E)

X. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substance subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A - F)

Y. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

Z. Changes to Permits for Emissions Trading

No permit revision shall be required, under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-490 I)

AA. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-490, except subsection N, shall be included to determine compliance.

2. The permit shield described in 9 VAC 5-80-500 shall extend to all terms and conditions that allow such increases and decreases in emissions.

3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-360 through 9 VAC 5-80-700.

(9 VAC 5-80-490 I)

IX. Phase II Acid Rain Allowances and Requirements

Phase II Acid Rain Permit - *The attached Phase II Acid Rain permit is incorporated into this permit by reference. The owners and operators of the source shall comply with the standard requirements and special provisions set forth in the application.*
(9 VAC 5-80-440 and 9 VAC 5-80-490 A.4.a and c, B, C, E, F, M, O and P)

A. SO_2 Allowance Allocations and NO_x Requirements for affected units
(9 VAC 5-80-490 A.4)

		2001	2002	2003	2004	2005
CT 1	SO_2 allowances, under Table 2, 3,or 4 of 40 CFR Part 73. (tons)	None.[1]	None.[1]	None.[1]	None.[1]	None.[1]
	NO_x limit	Not Applicable				

[1] See Subsection B.1 and B.2.a and C.2.b.

B. Additional Requirements, Notes, Comments, and Justifications.

1. Additional Requirements:

Doswell Limited Partnership shall submit a complete permit application that includes all of the information required under 40 CFR §§72.21 and 72.31 [and includes a complete NO_x compliance plan in accordance with 40 CFR §76.9(c)] at least 6 months, but no earlier than 18 months, prior to the date of expiration of the existing Phase II Acid Rain permit. EPA forms shall be used.
(9 VAC 5-80-430 C.5)

2. Notes

a. SO_2 allowances may be acquired from other sources in addition to those allocated by U.S. EPA. No revision to this permit is necessary in order for the owners and operators of this unit to hold additional allowances recorded in accordance with 40 CFR Part 73. The owners and operators of this unit remain obligated to hold sufficient allowances to account for SO_2 emissions from this unit in accordance with 40 CFR 72.9(c)(1).
(9 VAC 5-80-420 C.1 and H.1 and 9 VAC 5-80-490 O)

b. This unit was not eligible for SO_2 allowance allocation by U.S. EPA under Section 405 of the Clean Air Act and the Acid Rain Program, so none were assigned in 40 CFR Part 73, Table 2.
(9 VAC 5-80-420 C.6)

3. Justifications:

a. CT 1 is a gas-fired/oil-fired simple cycle combustion turbine. Oil and gas fired emission units are not subject to NO_x acid rain limitations under 40 CFR Part 76.
(9 VAC 5-80-420 D)

b. Doswell Limited Partnership has obtained a PSD permit to construct and operate a combustion turbine at their Hanover County facility. The permit was issued on April 7, 2000.

c. This acid rain permit only applies to the new combustion turbine CT 1 permitted on April 7, 2000. Doswell Limited Partnership also operates four combustion turbines each equipped with a ductburner. The turbines and duct burners fire natural gas an low liquid sulfur petroleum product to make electricity. A PSD permit was issued to the facility on May 4, 1990. The facility operates as an independent power producer. Acid rain regulation do not apply to previously constructed turbines and duct burners because the facility had a qualifying power purchase commitment to sell at least 15 percent of its total net output capacity as of November 15, 1990. This exemption is listed in 40 CFR 72.6(b)(6)(i) and (ii).

X. NO_x Allowance Budget Trading Permit Requirements

A. General Conditions

1. A review of the air emission units included in this permit approval has determined that the equipment listed in the following table meets the definition of a NO_x Budget Unit and falls subject to the NO_x Budget emission limitations under 9 VAC 5-140-40 or for opt-in sources 9 VAC 5-140-800. As required by 9 VAC 5-140-200 A, for each NO_x Budget source required to have a federally enforceable permit, such permit will include the NO_x Allowance Budget Trading permit to be administered by the permitting authority. This section represents the NO_x Budget Trading permit.
(9 VAC 5-140-40) or (9 VAC 5-150-800)

2. The NO_x Budget Trading permit will be administrated by the VADEQ under the authority of 9 VAC 5-80-360 et seq., Article 3 and 9 VAC 5-140-10 et seq.
(9 VAC 5-140-200 A)

3. The following air emission unit(s) have been determined to meet the applicability requirements as provided in 9 VAC 5-140-40 A.1 and A.2. Units that do not meet this definition are not defined as 25-Ton Exemption Units and are not permanently shutdown can be included in the NO_x Budget Trading program as “opt-in” air emission sources.
(9 VAC 5-140-40 A) for Opt-In sources (9 VAC 5-140-800).

Table X – 1 Facility NO_x Budget Units				
Facility Unit ID	**Unit NATS Code**	**Unit Name and description**	**Maximum Heat Capacity (MMBtu/hr)***	**Maximum Generation Capacity (megawatts)****
052019	052019000501	Unit 501 Combustion Turbine/Duct Burner	1503 mmBTU/hr - no. 2 fuel oil	122 MW – output
			1502 mmBTU/hr – NG	
052019	052019000502	Unit 502 Combustion Turbine/Duct Burner	1503 mmBTU/hr – no. 2 fuel oil	122 MW – output
			1502 mmBTU/hr – NG	
052019	052019000601	Unit 601 Combustion Turbine/Duct Burner	1503 mmBTU/hr – no. 2 fuel oil	122 MW – output
			1502 mmBTU/hr – NG	
052019	052019000602	Unit 602 Combustion Turbine/Duct Burner	1503 mmBTU/hr – no. 2 fuel oil	122 MW – output
			1502 mmBTU/hr – NG	
052019	052019000CT1	Simple Cycle Combustion Turbine CT1	1932.4 mmBTU/hr – no. 2 fuel oil	190.5 MW-output
			1752.2 mmBTU/hr – NG	185 MW – output

*: The maximum heat capacity is from both the duct burners and the combustion turbines.
**: The listed maximum generation capacity (megawatts) is only for the turbines.

4. This NOx Budget Trading permit will become effective on May 31, 2004.
(9 VAC 5-140-240.1)

B. Standard Requirements

1. Monitoring requirements.

   a. The owners and operators and, to the extent applicable, the NO_X authorized account representative of each NO_X Budget source and each NO_X Budget unit at the source shall comply with the monitoring requirements of Article 8 (9 VAC 5-140-700 et seq.) of this part. (9 VAC 5-140-60 B.1)

   b. The emissions measurements recorded and reported in accordance with (9 VAC 5-140-700 et seq.) (subpart H of 40 CFR part 97) shall be used to determine compliance by the unit with the NO_x Budget emissions limitation under paragraphs B.2.a. through B.2.h.
   (9 VAC 5-140-60 B.2)

The following approved methods will be used to calculate NOx emission rates

Pollutant or Stack Parameter	USEPA Test Methods (40 CFR Part 60, Appendix A)
NO_x Concentration	USEPA Method _7E___
Moisture	USEPA Method _4___
Volumetric air flow	USEPA Method _2___
Diluent gas	USEPA Method _3A___

2. Nitrogen oxides requirements.

   a. The owners and operators of each NO_x Budget source and each NO_x Budget unit at the source shall hold NO_x allowances available for compliance deductions under 9 VAC 5-140-540 A, B, E, or F, as of the NO_x allowance transfer deadline, in the unit's compliance account and the source's overdraft account in an amount not less than the total NO_x emissions for the control period from the unit, as determined in accordance with Article 8 (9 VAC 5-140-700 et seq.) of this part, plus any amount necessary to account for actual utilization under 9 VAC 5-140-420 E for the control period or to account for excess emissions for a prior control period under 9 VAC 5-140-540 D or to account for withdrawal from the NO_x Budget Trading Program, or a change in regulatory status, of a NO_x Budget opt-in unit under 9 VAC 5-140-860 or 9 VAC 5-140-870.
   (9 VAC 5-140-60 C.1)

   b. Each ton of nitrogen oxides emitted in excess of the NO_x Budget emissions limitation shall constitute a separate violation of this part, the Clean Air Act, and applicable Virginia Air Pollution law.
   (9 VAC 5-140-60 C.2)

   c. A NO_x Budget unit shall be subject to the requirements under 9 VAC 5-140-60 C.1 starting on the later of May 31, 2004 or the date on which the unit commences operation.
   (9 VAC 5-140-60 C.3)

   d. NO_x allowances shall be held in, deducted from, or transferred among NO_x Allowance Tracking System accounts in accordance with Article 5 (9 VAC 5-140-400 et seq.), Article 6 (9 VAC 5-140-500 et seq.), Article 7 (9 VAC 5-140-600 et seq.), and Article 9 (9 VAC 5-140-800 et seq.) of this part.
   (9 VAC 5-140-60 C.4)

   e. A NO_X allowance shall not be deducted, in order to comply with the requirements under 9 VAC 5-140-60 C.1 for a control period in a year prior to the year for which the NO_X allowance was allocated.
   (9 VAC 5-140-60 C.5)

   f. A NO_X allowance allocated by the permitting authority or the administrator under the NO_X Budget Trading Program is a limited authorization to emit one ton of nitrogen oxides in accordance with the NO_X Budget Trading Program. No provision of the NO_X Budget Trading Program, the NO_X Budget permit application, the NO_X Budget permit, or an exemption under

9 VAC 5-140-50 and no provision of law shall be construed to limit the authority of the United States or the State to terminate or limit such authorization.
(9 VAC 5-140-60 C.6)

g. A NO_x allowance allocated by the permitting authority or the administrator under the NO_x Budget Trading Program does not constitute a property right.
(9 VAC 5-140-60 C.7)

h. Upon recordation by the administrator under Article 6 (9 VAC 5-140-500 et seq.), Article 7 (9 VAC 5-140-600 et seq.), or Article 9 (9 VAC 5-140-800 et seq.) of this part, every allocation, transfer, or deduction of a NO_X allowance to or from a NO_X Budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NO_X Budget permit of the NO_X Budget unit by operation of law without any further review.
(9 VAC 5-140-60 C.4)

3. Excess emissions requirements.

a. The owners and operators of a NO_x Budget unit that has excess emissions in any control period shall:

1. Surrender the NOX allowances required for deduction under 9 VAC 5-140-540 D 1; and

2. Pay any fine, penalty, or assessment or comply with any other remedy imposed under 9 VAC 5-140-540 D 3.

D. Recordkeeping and Reporting Requirements.

The following requirements concerning recordkeeping and reporting shall apply:

1. Unless otherwise provided, the owners and operators of the NO_X Budget source and each NO_X Budget unit at the source shall keep on site at the source each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the permitting authority or the administrator.
(9 VAC 5-140-60 E.1)

a. The account certificate of representation for the NO_X authorized account representative for the source and each NO_X Budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 9 VAC 5-140-130; provided that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate of representation changing the NO_X authorized account representative.
(9 VAC 5-140-60 E.1)

b. All emissions monitoring information, in accordance with Article 8 (9 VAC 5-140-700 et seq.) of this part; provided that to the extent that Article 8 (9 VAC 5-140-700 et seq.) of this part provides for a three-year period for recordkeeping, the three-year period shall apply.
(9 VAC 5-140-60 E.1)

c. Copies of all reports, compliance certifications, and other submissions and all records made or required under the NO_X Budget Trading Program.
(9 VAC 5-140-60 E.1)

d. Copies of all documents used to complete a NO_X Budget permit application and any other submission under the NO_X Budget Trading Program or to demonstrate compliance with the requirements of the NO_X Budget Trading Program.
(9 VAC 5-140-60 E.1)

2. The NO_X authorized account representative of a NO_X Budget source and each NO_X Budget unit at the source shall submit the reports and compliance certifications required under the NO_X Budget Trading Program, including those under Article 4 (9 VAC 5-140-300 et seq.), Article 8 (9 VAC 5-140-700 et seq.), or Article 9 (9 VAC 5-140-800 et seq.) of this part.
(9 VAC 5-140-60 E.1)

E. Certification

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports will be provided at the appropriate locations.
9 VAC 5-50-30 and 9 VAC 5-140-300)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant or Stack Parameter	**USEPA Test Methods (40 CFR Part 60, Appendix A)**
NOx Concentration	USEPA Method __7E__
Opacity	USEPA Method __9__
Moisture	USEPA Method __4__
Volumetric Air Flow	USEPA Method __2__
Diluent gas	USEPA Method __3A__

(9 VAC 5-140-300 to 310)

F. Liability

1. Any person who knowingly violates any requirement or prohibition of the NOx Budget Trading Program, a NO_x Budget permit, or an exemption under 9 VAC 5-140-50 shall be subject to enforcement pursuant to applicable State or Federal law.
(9 VAC 5-140-100 F.1)

2. Any person who knowingly makes a false material statement in any record, submission, or report under the NO_x Budget Trading Program shall be subject to criminal enforcement pursuant to the applicable State or Federal law.
(9 VAC 5-140-100 F.2)

3. No permit revision shall excuse any violation of the requirements of the NO_x Budget Trading Program that occurs prior to the date that the revision takes effect.
(9 VAC 5-140-100 F.3)

4. Each NO_x Budget source and each NO_x Budget unit shall meet the requirements of the NO_x Budget Trading Program.
(9 VAC 5-140-100 F.4)

5. Any provision of the NO_x Budget Trading Program that applies to a NO_x Budget source or the NO_x authorized account representative of a NO_x Budget source shall also apply to the owners and operators of such source and of the NO_x Budget units at the source.
(9 VAC 5-140-100 F.5)

6. Any provision of the NO_x Budget Trading Program that applies to a NO_x Budget unit or the NO_x authorized account representative of a NO_x budget unit shall also apply to the owners and operators of such unit. Except with regard to the requirements applicable to units with a common stack under Article 8 (9 VAC 5-140-700 et seq.), the owners and operators and the NO_x authorized account representative of one NO_x Budget unit shall not be liable for any violation by any other NO_x Budget unit of which they are not owners or operators or the NO_x authorized account representative and that is located at a source of which they are not owners or operators or the NO_x authorized account representative.
(9 VAC 5-140-100 F.6)

G. Effect on Other Authorities.

1. No provision of the NO_x Budget Trading Program, a NO_x Budget permit application, a NO_x Budget permit, or an exemption under 9 VAC 5-140-50 shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the NO_x authorized account representative of a NOx Budget source or NO_x Budget unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, the Clean Air Act.
(9 VAC 5-140-100 G)

XI. State-Only Enforceable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-690 concerning review of proposed permits by EPA and draft permits by affected states.

1. Odor.

   None.

2. State toxics rule

   The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

From the December 20, 2002 NSR Permit Condition Numbers: 23.

23. Toxics pollutant emissions from each combustion turbine/duct burner exhaust shall not exceed the limitations specified below:

Beryllium	*0.004 lbs/hr/stack*	*0.09 lbs/day/stack*
Formaldehyde	*0.609 lbs/hr/stack*	*14.60 lbs/day/stack*
Nickel	*0.255 lbs/hr/stack*	*6.13 lbs/day/stack*

(9 VAC 5-50-180 of State Regulations)

3. Other:

The TSP limits were changed to PM (TSP) so as to reflect the Virginia PSD regulation definition of Particulate Matter as PM (TSP) for the significance levels used in PSD determinations and in other parts of the state regulations. PM (TSP) is equal to PM10 in all the limitations in the NSR permit and Draft Title V permit.
(9 VAC 5-80-490 N and 9 VAC 5-80-700)